

REMARKS

Claims 1 through 6 are pending in this application. Claims 1 through 6 have been amended and claims 7 and 8 have been newly added by this amendment.

Claim Objection

Claim 6 was objected to because of the indefiniteness of the phrase “determining a predetermined disk drive.”

Claim 6 has been amended above to correct this problem. In addition, other revisions were made to claims 1 through 6 to more particularly and distinctly define the claimed subject matter as an apparatus, using means-plus-function terminology rather than process step terminology. The objection to claim 6 should therefore be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claim 1, 2, and 6 were rejected under 35 U.S.C. § 102(e) for alleged anticipation by Jones U.S. Patent No. 5,572,660.

Claim 6

Claim 6 has been amended to add additional language of limitation at the end of the claim, to emphasize that in the event that old parity information does not exist in a cache, then the controller reads old parity information from the drive and then moves it to the cache. This provides an “update.” Jones does not teach such updating.

Furthermore, the instant invention provide a *plurality* of caches to store the parity information. Unlike the cited art, the instant invention assigns a separate cache

corresponding to each disk. This greatly improves the processing speed over that of prior art devices and distinguishes the instant invention from the art of record.

Claims 1 and 2

Claims 1 and 2 were amended hereinabove to improve clarity and more particularly and distinctly claim the invention. In particular, apparatus terminology (means-plus-function) now replaces process language.

The instant invention provide a *plurality* of caches to store the parity information. Unlike the cited art, the instant invention assigns a separate cache corresponding to each disk. This greatly improves the processing speed over that of prior art devices and distinguishes the instant invention from the art of record.

Claim Rejections under 35 U.S.C. § 103

Claims 3 through 5 were rejected under 35 U.S.C. § 103(a) for alleged unpatentability over Jones '660 in view of Holland *et al.* U.S. Patent No. 5,455,934.

Claim 3

The office action (p. 5) states that it is known that the “nature of disk access invites a transfer mechanism sequentially from *some* position” (emphasis added). It is further asserted:

[T]he advantage of faster access due to reduced seek time, and higher sustained data rates would have motivated an artisan to arrange this information from the outermost cylinder. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to sequentially arrange the recovery information from the most outer cylinder in Jones, because this method reduces seek time, results in higher sustained data rates, and

therefore improves performance.

Applicant (hereinafter "Lee") respectfully traverses and challenges the aforesaid assertions. First, that the "nature" of disk access invites a transfer mechanism is no basis for concluding that any teaching, suggestion, or motivation existed in the prior art to utilize Lee's particular expedient. Selecting his expedient by combining Holland with Jones is pure hindsight.

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999)(teaching or motivation or suggestion to combine is an "essential evidentiary component of an obviousness holding"); *In re Rouffet*, 149 F.3d 1350, 1355, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998); *In re Chu*, 66 F.3d 292 (Fed. Cir. 1995); *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072 (Fed. Cir. 1994)("When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination."); *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1586, 1589-90 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q.2d 929, 933 (Fed. Cir. 1984).

"Combining prior art references without evidence of such a suggestion,

teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability.” Doing that, as has been done in regard to lee's invention, is “the essence of hindsight.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). The showing must be “clear and particular.” Broad conclusory statements standing alone, as in the present office action, are not legally sufficient. *Id.* There must be “particular findings regarding the locus of the suggestion, teaching, or motivation to combine the prior art references.” *Id.* at 1000. The PTO must explain, as it did not do here, what specific understanding or technical principle would have suggested the combination of references. *Id.*; *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1459 (Fed. Cir. 1998).

Furthermore, the instant rejection is based on the conclusion of a motivation or suggestion to reduce seek time, result in higher drive rates, and therefore improve performance. But an artisan would not be specifically motivated to combine Jones and Holland to accomplish these things unless he first knew Lee's invention. Only hindsight supplies this motivation. That is insufficient and improper.

Finally, the rejection is based on “ordinary skill in the art.” But the record contains no findings on what is the ordinary level of skill in the pertinent art, no substantial evidence of record to support such findings, and no identification of what is the pertinent art.

In *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit overturned an obviousness rejection by the Board because of its failure to make the kind of obviousness legal analysis commanded in *Graham v. John*

Deere Co., 376 U.S. 1, 17-18 (1966). Such a legal analysis must begin with making specific findings of fact regarding the level of ordinary skill in the art. See also *In re Mayne*, 104 F.3d 1339, 1341, 41 USPQ2d 1451, 1453 (Fed. Cir. 1997); *In re Huang*, 100 F.3d 135, 138, 40 USPQ2d 1685, 1688 (Fed. Cir. 1996). The Federal Circuit said in *Dembiczak* (175 F.3d at 1000-01, 50 USPQ2d at 1618):

The Commissioner of Patents and Trademarks ("Commissioner") attempts to justify the Board's decision on grounds different from that relied upon by the Board, arguing that one of ordinary skill in the art would have been motivated to combine the references. Of course, in order to do so, the Commissioner must do what the Board did not do below: make specific findings of fact regarding the level of skill in the art ("a designer and manufacturer of trash and leaf bags, particularly one specializing in the ornamental and graphic design of such bags")

See also *In re Kaplan*, 789 F.2d 1574, 1580, 229 USPQ 678, 683 (Fed. Cir. 1986) ("Even if obviousness of the variation is predicated on the level of skill in the art, prior art evidence is needed to show what that level of skill was."). Thus, this office action lacks evidence and findings that the Federal Circuit considers essential to support a rejection.

Claims 4-5

These claims depend from claim 3, which has not been established to be unpatentable, per the PTO's burden.

The PTO has the burden of proof, by a preponderance of evidence, to show that an applicant is not entitled to a patent because the claimed subject matter is anticipated by or obvious from prior art of record. A patent applicant is entitled to

a patent “unless” the PTO establishes otherwise. See, e.g., *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994); *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992); *In re Caveny*, 761 F.2d 671, 674 (Fed. Cir. 1985); *In re Warner*, 379 F.2d 1011 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968).

Accordingly, claims 4-5 are patentable .

New claims 7-8

New claims 7 and 8 are presented in accordance with the PTO's new guidelines on § 112, per. 6. Claim 7 “invokes” § 112, par. 6, in that the claimed improvement is a functional language without structural acts. Such a claim incorporates by reference the corresponding acts, materials, and structures of the specification, so that the specification operates as a “glossary” for the functional language of the claim, *Chuiminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.* 145 F.3d 1303, 1308, 46 USPQ2d 1752 (Fed. Cir. 1998).

Claim 8 further particularizes the claimed subject matter in terms of features discussed above as distinguishing the claimed subject matter from the art of record.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this response.

Respectfully submitted,

Darren R. Crew

DARREN R. CREW (REG. NO. 37,806)

for Robert E. Bushnell,
Attorney for the Applicant
Registration No.: 27,774

1522 "K" Street N.W., Suite 300
Washington, D.C. 20005
(202) 408-9040

Folio: P54508
Date: 9/21/00
I.D.: REB/RHS